

1 MS. SANFORD: If I may follow up -- but the
2 question is if the service is available, however it is made
3 available and by whomever it is made available, do you think
4 the end users will come in the quantities -- will they
5 connect?

6 And, Betsy, it's probably a good question for
7 you, based upon your proposals.

8 MS. ROE: Yes. And I think that that's a very
9 important question and one that we were concerned about, and
10 what we heard anecdotally is that most of the providers felt
11 that the market demand was growing for these services but
12 that the price points at which they were able to offer their
13 service in areas of low population density made it difficult
14 for a lot of people to take advantage of the service.

15 And so we had some very innovative, small rural
16 telephone companies that have upgraded their networks and
17 are providing cutting-edge technology and high-speed
18 broadband services in their very small communities, but they
19 have a handful of takers because the price points are
20 significant: \$50-\$75 a month, and that's not something that
21 the average family feels at this point that they can afford.

22 And so one of the things that we are looking at
23 in terms of recommendations are trying to find ways to
24 increase consumer demand, push technology education out so
25 that little by little, you have that growing demand and that

1 core of services that will support lower price points so
2 that people can take advantage of that.

3 MR. HILSABECK: I think one other point -- if you
4 want to look at a current example, look at the wireless
5 market. I think those of us who entered the wireless
6 markets ten or 15 years ago would have been tickled to death
7 to think we ever would have had 10 percent penetration of
8 the market.

9 In Lincoln, Nebraska, which is not a small
10 community -- it's a little larger city -- we've got
11 penetrations just on our side of the license approaching 25
12 percent. I have no idea what competitors have in terms of
13 market. And I think that some of this is generational. If
14 you looked at the -- with those kind of penetration rates,
15 if you eliminated all the people over 50 years of age, I
16 suspect the penetration rate would go up substantially, and
17 I think the same is true with computers.

18 We talk about the paperless society and so forth.
19 I think it's generational. People my age and older haven't
20 quite made the transition, but when you talk to our children
21 and our grandchildren, they're very comfortable with this.
22 When daylight savings time takes place twice a year, call
23 the grandkids. They're the only ones who can set all the
24 clocks.

25 And so I think it's generational, so I think the

1 answer to your question is it may appear to grow slowly but
2 it will grow. Inexorably, it will grow. And if those
3 networks are there, people will use them.

4 MR. McLEAN: I have a quick question. The Rural
5 Utility Service is both a policy and planning agency of the
6 United States Department of Agriculture as well as a lending
7 agency. We have about 80 borrowers and a little over 30
8 borrowers in the state of Nebraska. And as I traveled
9 across the country, the story of rural America is very
10 mixed.

11 There's some places where there are, as the
12 chairman said, some pretty extraordinary things happening,
13 and some companies and cooperatives and communities are
14 taking their future into their hands and really leading the
15 way in the information revolution.

16 I was wondering, those of you who have looked at
17 your entire state, taken the inventory of what's available,
18 have you observed examples of places where they have the
19 advanced services and how that's transforming the community.

20 LT. GOVERNOR MAURSTAD: I don't think there's any
21 question that that is the case, but I would say that that's
22 not just limited to the area of advancement in technology.
23 What you're talking about is local leadership. You're
24 talking about what individuals at the local level are
25 identifying as important -- critically important to their

1 future, and then having the ability to develop consensus
2 within that community to move forward in whatever it is.
3 Technology is in that area.

4 Some communities think that it is more important
5 than others and develop the local framework to be able to
6 begin the partnership with state government, federal
7 government, local providers, and the whole gamut.

8 So I don't think it's unique to just technology,
9 but I think just like there is competition in other areas,
10 as more and more communities begin to see the benefits of
11 the coming together and the recognition that technology is
12 in fact critical to their future, it will continue to
13 spread.

14 MS. ANDERSON: I haven't assessed Iowa like you
15 have, but because of Hawarden's position, I've received many
16 calls from many communities in Iowa, Minnesota, South Dakota
17 in this tri-state region, but not only that, in many other
18 states. And many of you are here, like Wyoming, like
19 Alabama, like several states -- and those communities are
20 calling with the same concerns Hawarden had: concerned
21 about services and the advanced communications.

22 They wanted to know how we went about what we
23 did, and we had a lot in common, so there's a great need out
24 there. And when Mr. Kennard talked about the little town of
25 357, I chuckled for a minute because I thought, We're not

1 much bigger. But there's many, many of us out there that --
2 in rural Iowa.

3 But I just wanted to point out, I can believe the
4 calls I've taken, the letters and the e-mails of the
5 communities in the same position that we have been in.

6 CONGRESSMAN LATHAM: I just have one question.
7 First of all, all the references here with the Field of
8 Dreams about build it and they will come, and your joke
9 about heaven -- is this heaven? No, it's Iowa. This isn't
10 actually Iowa, but if you go outside you can look across the
11 river and see it over there.

12 Anyway, put in that plug. Right, Mayor?

13 MAYOR DOUGHERTY: Right.

14 CONGRESSMAN LATHAM: I would just have one
15 question for Betsy. It would seem to me with the Iowa
16 network that's in place, the ICN, that it's a case where
17 there's concentration -- and it's a little town of Mallard
18 [phonetic], Iowa; I understand there are seven fiber optics
19 lines going past Mallard, Iowa, and one of them is on the
20 ICN. But it's a matter of access for a lot of other people.

21 I just wonder, is the commission going to have
22 any specific recommendation as to what to do with the ICN,
23 whether or not you are going to -- eventually I think you're
24 going to have to find a way to integrate it into the whole
25 system because currently it is very much underused. We have

1 a lot of very nice ICN labs around the state that are
2 sitting dark all day long.

3 MS. ROE: Congressman, you make a very good
4 point, and the council -- we agree that it's an
5 underutilized asset, but we are not in a position as the
6 council to make a recommendation by June as to how best to
7 utilize that infrastructure and that asset. We believe that
8 that is best left to a conversation and some very candid
9 discussions between the private sector and the Iowa
10 Utilities Board and our state IT professionals.

11 There's a lot of ways that that infrastructure
12 could be utilized in partnership with the private sector.
13 There have been studies, as you may well know, done by the
14 State of Iowa whether the infrastructure should be
15 privatized, whether private sector providers should have
16 access to it, whether it should be allowed to serve other
17 authorized users. There's a broad range of options on the
18 table, but the council does not feel at this point that it
19 has the expertise, nor does it have the confidence and the
20 understanding of the industry's goals to be able to make a
21 specific recommendation with regard to the ICN.

22 SENATOR KERREY: I think we better move on to the
23 next panel now. Thank you all very much. That was
24 wonderful.

25 (Applause.)

1 (Whereupon, a short recess was taken.)

2 MS. SANFORD: It's my honor to introduce my very
3 good friend, Allan Thoms, who needs no introduction to any
4 of you, but I will do it anyway.

5 He is the Chairman of the Iowa Utilities Board
6 and has been since his appointment in April of 1995. He
7 holds a variety of offices in our National Association of
8 Regulatory Utilities Commissioners, including the co-vice-
9 chairmanship of the Committee on Telecommunications on which
10 I enjoy serving with Allan. I told him one of my first
11 impressions of landing in Omaha was to realize that there
12 are all these people that talk like Allan Thoms.

13 So it's a pleasure to introduce him, and I'll
14 turn this panel over to Allan.

15 (Applause.)

16 MR. THOMS: Jo Anne, thank you very much. It's
17 a pleasure to be here today.

18 And, Mr. Chairman, I hope you recognize the fact
19 that Iowa's not the one that raised the issue of the ICN.

20 CHAIRMAN KENNARD: Yes.

21 MR. THOMS: I would be remiss if I didn't extend
22 some thanks here while I have this opportunity. First of
23 all, our staff that worked on this -- and when I say our, I
24 don't mean just Iowa but also Nebraska, and I'll let Anne
25 thank specifically the Nebraska people, but I would like to

1 thank Bill Smith and Larry Stevens [phonetic] from our staff
2 for putting this one.

3 And then we would probably in other circumstances
4 would be meeting in a high school gymnasium some place if it
5 were not for my other good friends here, Chuck Long and John
6 Winkle [phonetic] and Steve Broddeck [phonetic]. These are
7 the people that when I need something in Western Iowa, I can
8 give them a call and it gets done. So I wanted to extend
9 those thank-yous at this point in time.

10 I think the panel that we have today is very
11 interesting, because what we have seen in this process and
12 particularly going to the first panel is that we have the
13 ICN and that has its limitations. We also have then the
14 Hawardens, and they also have their limitations as far as
15 the entire exchange is concerned, and they can serve the
16 municipality specifically, but reaching out into the rural
17 part of those exchanges becomes another process.

18 DSL has also now come on to the scene, and again,
19 that has its limitations, and so we are looking basically at
20 some areas that we need to look at technology to see where
21 that can be, and I think we have a panel here today that
22 gives us that opportunity. It says on the program, Wireless
23 Panel Discussion, but I guess I would add a little bit to
24 that by pointing out is wireless the answer? And think
25 that's on a lot of people's minds at this point in time.

1 And I think also the fact that when we talk
2 about -- we heard again subsidies today, and we talked about
3 was universal service expended in the right manner? Are
4 there some thinking out of the box that we can do with
5 universal service? Is that going to be successful? I know
6 that Iowa is looking at various revenue enhancements such as
7 the repeal of the sales tax -- sales and use tax as an
8 opportunity to develop enhanced services or to incent them.

9 Snowe-Rockefeller has joined together to put
10 forth a bill that will be promoting, again, tax credits --
11 investment tax credits for special areas in rural and also
12 specific technologies. And so what I'm going to ask the
13 panel, among -- telling your success stories, but I think
14 also if you would refer to that part of it as to the
15 incentive packages. Are we just creating more implicit
16 subsidies, as I think Congressman Tauzin said when he had
17 heard of the Rockefeller-Snowe [phonetic] bill? Are we just
18 going back to the old subsidy process if we do that? Is it
19 necessary? How does the wireless industry look at that?

20 So I'm not going to take up any more of your
21 time, and let me introduce my panel today, both in the way
22 that they are recorded in your program so that you can
23 follow that, and also in their presentations.

24 First of all is Michael J. Tracy, and Michael has
25 been involved in broadcasting for over 20 years as president

1 and founder of Tracy Broadcasting Corporation, licensee of
2 five operating regional broadcasting facilities with
3 construction permits for two additional FM licenses. In
4 1982 he also founded Tracy Corporation II, doing business as
5 Western Total Communications, a regional paging and
6 communications company which provides regional paging
7 service to parts of Nebraska, Wyoming, and Colorado. This
8 company is now known as Telemetrix Technologies.

9 Our second panelist then is Lyle Korver. Lyle is
10 from Orange City, Iowa. He started out in 1978 with the
11 Sioux Electric Cooperative as the office manager. And if I
12 go up through this process we can see, again, the subject
13 for another one of these sessions, the mergers of the
14 cooperatives, to where now Lyle is the executive vice-
15 president and general manager of Northwest RECOMMENDATION in
16 Orange City, which is a consolidated cooperative of
17 Northwest RECOMMENDATION, Ida County RECOMMENDATION,
18 Plymouth Electric Cooperative. And if you go down further,
19 Sioux and O'Brien RECOMMENDATION as well.

20 And as I said, he is now the executive vice-
21 president and general manager.

22 Our third panelist today is Eric Sonestrom. Eric
23 is president and chief executive officer of Airspan
24 Networks, Inc., and managing director of Airspan
25 Communications, Limited.

1 He was born in Pennsylvania and educated at the
2 College of Engineering at the University of California at
3 Berkeley, and following his education, he worked for eleven
4 years for Bell Labs and AT&T entities in New Jersey, Italy,
5 and Holland. He has been managing Airspan in the U.K.,
6 since July of '96, and in this capacity he has managed the
7 overall division while it was under the DSC umbrella. And
8 since Airspan Networks was set up in early '98 he has served
9 as Chief Operating Officer and now Chief Executive Officer.

10 Our fourth panelist is Michael J. Thompson.
11 Michael has recently been named President and Chief
12 Operating officer of Western Wireless Corporation after the
13 spinoff of Voice Stream Wireless from Western Wireless in
14 May of 1999.

15 Prior to his appointment as president and chief
16 operating officer, Michael served as chief operating officer
17 of Western Wireless since its formation in July of 1994.

18 And our last panelist today is John Stupka. John
19 was appointed president of MCI Worldcom Wireless Solutions
20 on January 19, 2000. John came to MCI Worldcom as a result
21 of their merger with Skytel Communications, where he served
22 as president and CEO since August of 1996. He is a 26-year
23 telecom veteran with an extensive background in both the
24 wired and wireless industry segments.

25 And our first panelist then is Michael Tracy.

1 Michael?

2 MR. TRACY: Thank you very much. My name is
3 Michael Tracy. I'm the President and Chief Executive
4 Officer of Telemetrix, Incorporated. We're a small
5 publicly-held company that was formed when I merged my
6 wireless telecommunications company with a billing software
7 company.

8 Prior to the merger, I was personally involved
9 the C Block and F Block auctions where we received designate
10 entity bidding credits. We were successful bidders for BTA
11 411 C and F, which we still own and which we are current
12 with our payments.

13 (General laughter.)

14 MR. TRACY: So you'll have a point of reference,
15 BTA 411 is located in Western Nebraska and covers a small
16 part of Eastern Wyoming. There are a total of 102,000 pops
17 in BTA 411 and we paid \$860,000 for the C license after
18 credits and \$93,000 for the F license after credits.

19 Our company has built a GSM system that is
20 operating in much of BTA 411. We recently completed
21 construction and now anticipate becoming fully commercial
22 with the service in the immediate future. We've had to deal
23 with all of these issues of building a network, including
24 funding, financing, and all of the things that any other
25 company has had to deal with, only we dealt with it on a

1 much smaller and much more personal scale.

2 For the initial terms of construction and
3 equipment installation, we concentrated on developing
4 sources of revenues through the provision of communication
5 services which will support the operation of a PCS system in
6 a very rural area. We have spent six years developing
7 telemetry data applications which work on digital
8 communication systems and which we initially projected would
9 serve the needs of rural people.

10 Through the development of telemetry data systems
11 we have found that the applications not only serve the needs
12 of rural people, the data applications work very well in the
13 urban and metropolitan areas. Our small company is not only
14 a PCS network operator in a rural area, but we are also a
15 small research/development and testing operation in a rural
16 area that has developed, patented, and now markets,
17 telemetry data systems to digital communication systems
18 operators in the United States, and soon we will be
19 announcing the integration of our technology and systems
20 operating in other countries.

21 We've also different, new, and novel ways of
22 delivering wireless local loop functionality over a PCS
23 network, operating on our PCS network currently. These
24 methods have patent applications granted with others
25 pending, and deliver a different blend of wireless local-

1 loop functionality and fundamentally inexpensive functional
2 telemetry and data services to consumers and customers on
3 both a domestic and now international basis.

4 The points that I would like to make at this
5 hearing are very simple, as they relate to the provision of
6 advanced services in rural areas.

7 First, the rules applicable to small companies'
8 bidding credits in the C and F auctions coming up should not
9 be changed. These credits enable small companies to become
10 much-needed economic resources in rural communities and
11 offer many benefits to rural consumers. Even as flawed as
12 the C auction was, the bidding credits in the C and F
13 auction provided our company the opportunity to locate in
14 our home area, to be able to build a network in that area,
15 and to use that network to develop services and systems
16 employing many local people.

17 We provide services that would otherwise be
18 unavailable in and to a sparsely populated area. As our
19 company grows, we have the potential of becoming an economic
20 resource to that region.

21 I think what we should remember is that it is
22 very difficult to attract economic development to rural
23 areas. Usually businesses have to be grown and developed in
24 those rural areas. By changing the rules in the upcoming
25 auctions, the Commission stands to disadvantage small

1 companies like Telemetrix from being able to participate,
2 grow, and be viable, thus inhibiting the economic
3 contributions and consumer benefits that small companies are
4 able to offer in rural areas. If anything, the upcoming
5 auctions should give even more bidding credits to small
6 companies.

7 Second, licenses granted to the public sector to
8 provide advanced services in rural areas should not be
9 perpetual in nature. Advanced services don't just happen in
10 rural areas. Companies with a background and understanding
11 of rural America are more likely to locate, adapt, and
12 effectively deal in rural environments.

13 Population density isn't something that we who
14 are members of a rural community deal with. Compared to
15 Western Nebraska, all of Iowa is densely populated.

16 (Laughter)

17 Many times advanced services are by necessity
18 funded, financed, or supported by the public sector. I
19 totally agree that such funding is necessary in many cases,
20 but we can't forget that the private sector pays taxes and
21 should not be denied certain eventual economic
22 opportunities.

23 Licenses to provide advanced services which have
24 been granted to the public sector should not be granted
25 perpetually. On review, those services may appropriately be

1 provided by the private sector after the public sector has
2 developed it. This approach has the potential of creating
3 economic activity in rural America.

4 Third, the private companies that choose to
5 invest in advanced services in rural areas should be given
6 some economic advantage to attract them to do so. This is
7 slowly starting to happen, but it is taking too much time.
8 Large companies speak to the services that they can provide
9 and the services that they will provide, but when it comes
10 time to talk about what they do provide, the fact is that
11 the service is generally provided in more populated areas.

12 We talked a lot about the opportunities that we
13 see of the young people in the schools and the high schools
14 and the access to advanced technology and broadband and how
15 that affects them. I look at that on the other end of the
16 scale.

17 My mother lives in a small town in Eastern Iowa.
18 She's 82 and is very computer literate. I had to give her
19 more high-speed processing power the other day. She
20 communicates with myself, all the members of her family, all
21 the members of her immediate family and extended family via
22 e-mail, sends pictures and uses it as much or more than she
23 uses her television. Her Internet service, however, is one
24 level above nonexistent. At least it gives her something to
25 wait on.

1 (Laughter)

2 No one at this hearing would accept the level of
3 service that she has to deal with in a one-provider area.
4 This doesn't seem to be out of the ordinary. My other rural
5 Iowa relatives, using sole providers have the same Internet
6 problems.

7 Not all of rural America is craving the absolute
8 latest, fastest service. Our experience is that people in
9 rural areas want service that is a lot like the people are
10 currently getting in urban areas, service which is
11 dependable, reasonable, available, functional, and worth the
12 associated cost. Bandwidth isn't really an issue when there
13 isn't dependable dial tone.

14 In summary, licenses to provide advanced services
15 are an asset to the community and can become an economic
16 advantage if properly used. Even if a license is purchased
17 it is the responsibility of the purchaser to make certain
18 that the areas served actually gain from the fact that the
19 license was issued.

20 It is the responsibility of the licensee or
21 service provider to serve the areas for which they are
22 licensed, not simply make the service available or put a
23 signal over an area, but to truly respond to the needs of
24 the people that live within those areas and, through this
25 service, narrow the distance of opportunity between rural

1 and urban communities.

2 I would like to thank the Nebraska Public Service
3 Commission and the Iowa Utilities Board for making it
4 possible for me to appear before you today on this panel.
5 Thank you very much.

6 (Applause.)

7 MR. THOMS: Michael, thank you.

8 Lyle?

9 MR. KORVER: Thank you, Chairman Thoms, and good
10 afternoon, distinguished guests. As general manager of
11 Northwest Rural Electric Cooperatives and also as vice-
12 president of Orange City Communications, I'm representing
13 both of these organizations on this panel today.

14 Over the course of the last couple of years, I've
15 had the opportunity to work with our power supplier,
16 Northwest Iowa Power Cooperative, Pioneer Holdings, Long
17 Lines, and several of our local municipal systems such as
18 the cities of Hawarden, Orange City, and Le Mars in trying
19 to bring advanced telecommunication services to Northwest
20 Iowa. We learned very early on that if we were to be
21 successful, we would need good partners.

22 Before I review our wireless activities and
23 partnership arrangements, I'd like to share a little
24 background about Northwest REC. For the past 60 years and
25 really since the beginning of REA, our cooperative has been

1 working hard to bring electric service to our rural service
2 area and to develop a reliable electric distribution system.
3 Our primary goal has been to ensure that our member owners
4 receive the same types of services that were available in
5 the urban areas at an affordable cost.

6 It was this same philosophy that spurred our
7 involvement in telecommunications in 1994 when our
8 cooperative purchased the territorial rights to market
9 direct TV programming services in Sioux and O'Brien
10 counties. Today we have over 2,700 subscribers receiving
11 digital television service over 18-inch direct broadcast
12 satellite systems.

13 In 1996 we expanded our involvement in
14 telecommunications when we began offering dial-up Internet
15 service in several communities. Today we offer 56K dial-up
16 Internet service in 12 communities and the surrounding rural
17 areas.

18 A key factor that led to the future development
19 of a broadband network in Northwest Iowa occurred in 1994
20 when our power supplier, Nipco [phonetic], learned that the
21 1.9 gigahertz microwave frequency that they were using to
22 operate their transmission automation system was going to be
23 auctioned off by the FCC for development to the personal
24 communications system or PCS. As a result, Nipco began to
25 study options in terms of the direction they should go for

1 their future communications needs, and they ultimately
2 decided to build a fiber optics ring, and today they have in
3 place a 400-mile ring.

4 They also decided to install additional fibers at
5 that time to make additional bandwidth available which would
6 be beyond their core business needs for use by their
7 municipal and REC members.

8 In 1998 our cooperative began looking at ways
9 that we could leverage this fiber ring in delivering
10 advanced telecommunications services to our members. At
11 that same time, Hawarden municipal was in the process of
12 installing an HFC system, and Patty reported on that
13 earlier. Northwest REC started to explore fixed wireless
14 local loop technologies that could be used to bring
15 comparable service to our electric customers outside of
16 Hawarden.

17 Finding available spectrum was one of the first
18 challenges we faced. Another challenge was finding a
19 company that had developed the wireless local loop
20 technology. We ultimately found an equipment company and we
21 were able to work out an arrangement with an F Block license
22 holder to do a fixed wireless local loop trial.

23 The four-month trial was successful, but
24 unfortunately the company we were working with ran into
25 financial constraints and they were not able to bring their

1 product to the marketplace, so we were back to square one.

2 We continued to explore other wireless local loop
3 technologies, and we've been working with Airspan, Eric's
4 company, in recent months. We were also successful in
5 acquiring a partitioned C Block PCS license for our four-
6 county area, and we're pleased that this was recently
7 approved by the FCC.

8 In early '99 we began having discussions with our
9 local municipal and telecommunications company relative to
10 pursuing a telecommunications partnership arrangement.
11 These discussions led to the development of a three-way
12 partnership involving the City of Orange City, Long Lines,
13 Limited, and Northwest REC. We call our organization Orange
14 City Communications, and it's a limited liability
15 partnership.

16 We believe this is one of the first partnerships
17 of its kind in the state. Long lines and Northwest REC have
18 developed a similar partnership with the City of Le Mars.

19 Orange City Communications is offering up 56K
20 dial-up Internet service and direct TV digital television
21 services to the citizens and businesses of Orange City and
22 the surrounding area at the current time. We have also
23 extended fiber optics into Orange City from Nipco's fiber
24 ring and we will soon be using this fiber system to deliver
25 high-speed data to our large commercial industrial

1 customers.

2 In addition, we've begun a new fixed wireless
3 local loop trial in Orange City and the surrounding rural
4 area. We are optimistic that this will be a feasible option
5 for deploying telephone and advanced broadband services. We
6 also plan to deploy this similar technology in rural
7 Hawarden and Le Mars.

8 We believe the combination of a fiber optics
9 backbone and a wireless distribution system is the most
10 economically feasible way to deliver broadband services in
11 our rural areas. However, it's still a very capital-
12 intensive venture and as you know, it's more costly to
13 deploy services here than in the urban areas.

14 In this regard we are pleased that several
15 senators, including Senator Harkin from Iowa, have co-
16 sponsored legislation called the Rural Broadband Enhancement
17 Act that would make low-interest loans available for these
18 types of projects. If approved it would help to ensure that
19 rural and small-town America would not be left behind in the
20 emerging broadband area.

21 We're also pleased that the FCC is holding these
22 field hearings to learn more about what is being done and
23 the challenges being faced in bringing broadband services to
24 rural America. While we have faced many challenges along
25 the way and we will continue to face challenges going

1 forward, we have continued to work hard in this area because
2 of the importance to our rural communities in having
3 affordable access to broadband services.

4 On behalf of Northwest REC and Orange City
5 Communications, I'd like to thank you for this opportunity
6 to participate on this panel and share a little bit about
7 our efforts to be a part of the telecommunications
8 revolution that's taking place. Thank you.

9 (Applause.)

10 MR. THOMS: Lyle, thank you.

11 Eric?

12 MR. SONESTROM: Good afternoon.

13 I'm going to spend a few minutes telling you
14 about Airspan Networks, Incorporated. We are a company
15 dedicated solely to the last miles. We have technology
16 that's been deployed in 20 different countries, aimed
17 primarily at rural and suburban applications and a
18 combination of voice and data networks.

19 Fixed wireless access technology traditionally
20 has not met the needs of the typical subscriber in markets
21 such as rural Iowa. Limitations have occurred because
22 copper-equivalent voice services have not been available and
23 high-speed Internet and data access has not been possible.
24 However, technology has advanced to new stages recently and
25 I'm happy to say Airspan has been a major driver behind

1 this, utilizing our CDMA technology in the PCS band as well
2 as other bands such as MMDS and various frequency bands
3 available around the world.

4 Many other fixed wireless technologies or final-
5 mile technologies focus only on data or only on voice. We
6 believe the successful business plan of the operator must
7 include both, and our technology includes both voice and
8 data capabilities.

9 Many options are available in urban and suburban
10 areas: cable modems, DSL modems, as well as wireless
11 technologies as Airspan can all be considered by network
12 planners in designing economic solutions. In the rural
13 areas there are many more challenges, especially around the
14 economics of the capital that must be invested. I believe
15 wireless is the most viable solution, because the bulk of
16 the capital is not invested until customers are actually
17 obtained.

18 Something to the effect of 80 percent of the
19 capital investment is dedicated to the equipment that goes
20 at the subscriber's premise, and this investment is only
21 required at the time that the subscriber actually signs up
22 for service from an operator such as Orange City
23 Communications. This is an important distinction with the
24 economics of both cable modems and DSL services.

25 Airspan has demonstrated here in Orange City that

1 fixed wireless access is a viable way to provide advanced
2 services economically. The services that you can see
3 tomorrow include both voice services as well as data access
4 for Internet applications that can be used either in schools
5 and businesses or else in residential applications.

6 We're introducing a product that combines two
7 voice lines with total quality and full voice capabilities
8 as well as a ten-base T-port for 512-kilobit Internet
9 access, and this technology has been cost-reduced to the
10 point where it's economic not only in business applications
11 but also in residential applications.

12 They're looking forward to deploying this here in
13 the PCS band, and we thank the efforts of the FCC in
14 deregulating this band and making it available for
15 applications such as ours.

16 Frequency is the most rare commodity in the
17 wireless business, and we are pleased to see that the
18 activities focused on the applications of technologies such
19 as ours and its frequencies have progressed very well here
20 in the US, and particularly we believe this can benefit the
21 rural communities such as your own.

22 In summary, I would like to thank our partners at
23 Orange City Communication for very good cooperation to date,
24 and we look forward to deploying a considerable amount of
25 this technology throughout the rural US.